REMARKS

Drawings

Formal drawings are submitted herewith.

35 U.S.C. §112.

Claims 21, 29, 35 and 36 have been amended in a manner believed to fully address the Examiner's observations with respect to 35 U.S.C. §112.

35 U.S.C. §102(e).

The Examiner has rejected claims 21 to 36 as being anticipated by Kadengal (US6928053) which is in the common ownership of the assignee.

Applicant respectfully disagrees with the Examiner's characterization of Kadengal, the content of which the applicant is naturally familiar, with respect to the rejected claims.

Kadengal discloses a method of managing resources in a switched network having a measurable actual network performance and a plurality of network users each having a respective desired data flow through the network from a respective network ingress at a respective ingress router. The method comprises:

(a) assigning a respective willingness to pay (WtP) value to each of a plurality of network users,

(b) assigning respective set point values for a network performance parameter for each of a plurality of routers in the network,

(c) assigning a respective initial price value to each router which is associated with the network performance parameter at the router, and

(d) operating a first control loop which is operable to:

(i) receive respective measures of the actual network performance at each of the routers,

(ii) calculate for each router, a plurality of difference values which are the respective difference between the actual performance network and the set point for each router,

(iii) adjust the price value for each router by a factor based on the respective difference value,

(iv) generate a flow price value for each network user by combining the price values for each of the routers in the path of the respective user's desired data flow through the network,

(v) allocate a resource share value for each network user which represents the value of the respective WtP value taking account of the respective flow price value, and

(vi) cause the ingress router for each user to restrict flow into the network ingress from each user in accordance with each user's allocated resource share value, whereby the actual network performance at each router is made to converge to the set point value for the respective router by automatic admission control adjustments at the network ingress routers.

The Examiner contends that Kadengal discloses a separate price for variance and in this connection makes reference to the WtP feature taught by this reference. The WtP (willingness to pay) as disclosed by Kadengal is not a separate price for variance derived by sampling an aggregated traffic flow on a network resource as taught by the present application and as claimed but is merely an expression of a network user's financial might compared to other users. A WtP value assigned to a user as taught by Kadengal is merely an expression of that user's willingness to pay for network resources such as bandwidth and through which the user secures a portion of such available resources and is a value that is actually derived from the user, by way of a service level agreement for network services or other user agreement with the network operator. The greater the WtP value for a particular user compared to other users, the bigger the share of resources that will be allocated to that user. This is quite clear from the foregoing method steps taught by Kadengal whereby each user is allocated a resource share value which represents the value of the respective WtP value taking account of the respective flow price value. More

simply stated, a user gets a share of resources depending on his WtP value as a proportion of the sum of such WtP values for all users competing for resources.

The Examiner also asserts that the set point value taught by Kadengal anticipates the "mean bandwidth" feature referred to in the claimed invention. However, the mean bandwidth feature is a measure of bandwidth of aggregated traffic flowing in a network resource to which an ingress traffic flow is to be admitted. In contrast, the set point value taught by Kadengal is not a measurement but a value assigned, possibly arbitrarily, to a router by the network operator. The function of the set point value is to ultimately enable the actual network performance at each router to be converged to its respective set point value by automatic admission control adjustments at the network ingress routers. In other words, the set point value is a network operator preset target for network performance at a router whereby traffic being admitted to the network is allocated to routers (network resources) in such a manner that the routers are not either overloaded or under-employed but tend to perform at or close to their respective set point values.

In the method taught by Kadengal, a (single) initial price value is calculated for each router, the initial price value comprising a difference between the set point value and actual network performance at said router. The initial price for each router is then adjusted taking into account the difference values for all routers and the adjusted price employed in a method that, through traffic admission control, seeks to ensure that traffic is allocated to routers such that the routers performances tend to their respective set point values, I.e. tend to a steady state performance level. It should be noted, therefore, that the assignment of respective set point values to each router absolutely precludes the use of more than one price per router and therefore precludes the use of *separate* prices for bandwidth and variance as claimed. One skilled in the art would readily appreciate that, if one attempted to use two or more separate prices for network performance parameters at the routers in the network of Kadengal, it would not be possible to achieve the steady state performance desired whereby the routers' performances tend to their respective set point values.

Consequently, Kadengal does not disclose all of the features of claim 1 nor could it lead one skilled in the art to the claimed invention.

The present invention addresses the problem of admitting traffic at ingress nodes to a network using two separate prices for contrasting network performance parameters, namely bandwidth and variance. The present invention recognizes that some users may want high, steady (low variance) bandwidth and are willing to pay a premium for low variance whereas other users are unconcerned with variance but require a certain mean bandwidth over time even if it is subject to fluctuation. In contrast, Kadengal is concerned with admitting traffic to a network according to competing users' willingnesses to pay for network resources such as bandwidth but at the same time seeking to control the network to reach a steady state whereby routers operate at or close to their limits but are neither overused or underused. As such, Kadengal discloses a single price paradigm.

The forgoing is equally applicable to all objected to claims which, it is submitted, are novel and not rendered obvious by Kadengal.

Favorable reconsideration is therefore urged.

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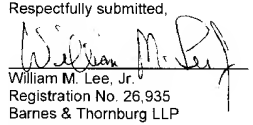
Respectfully submitted,



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